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Restoring Flint, Michigan; Planning for Sustainable Livelihoods

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By

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Section I: Introduction

Executive Summary

My creative component was designed to help government officials (local and state), city planners, local businesses, and other local organizations identify the main causes of the water crisis in Flint, MI, as well as find appropriate solutions to restore the community into a safe and healthy sustainable environment. In accomplishing this goal, hours of research was developed in analyzing periodic catastrophic events linking to the creation of the water crisis, to cause the weakening of the economy, natural resources, and local government in deeming the community as unlivable. In resolution, community development models and strategies are determined for Flint in getting the community shifted in the right direction towards sustainable livelihoods.

Overview

Flint, Michigan, is located in eastern Michigan and is the city seat of Genesee County. The Flint community has a projected population of 97,386 people and is positioned along the Flint River (Census Bureau, 2016). Flint sits as the seventh largest city in the state of Michigan and is 66 miles (106 km) northwest of Detroit (Encyclopedia Britannica, 2017). The small city of Flint stands 740 feet above sea-level, has a land area of 33.6 square miles, and has an average population density of 2,895 people per square mile (City Data, 2016).

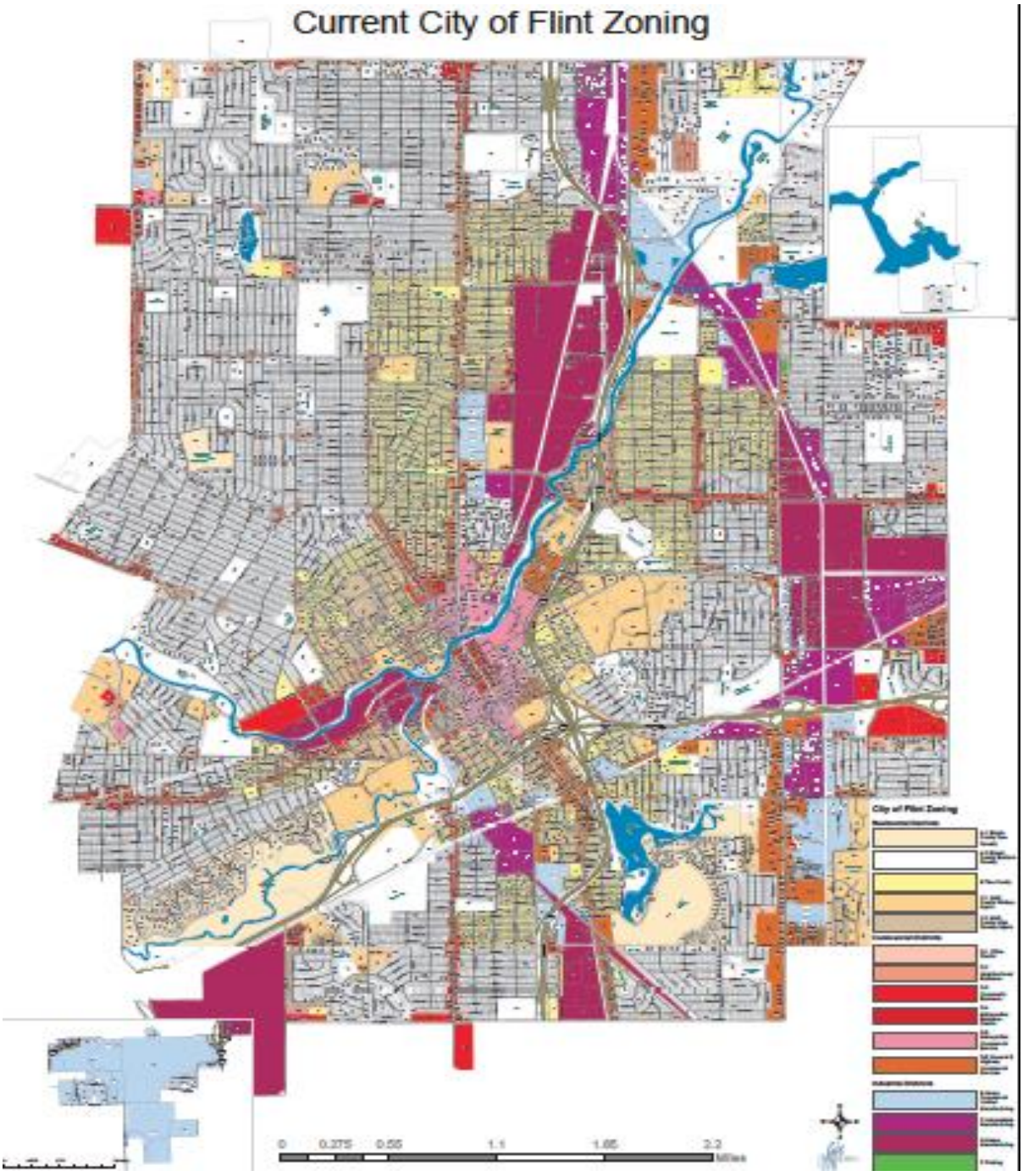
Map 1.1. Flint, Michigan, 2017
Source: (https://wrldmaap.blogspot.com/2017/02/flint-michigan-map.html)

Before looking for solutions in improving Flint, there first must be an assessment of what built environment and other community characteristics that best fits the Flint community. Coyle (2011) explains built environment as, "the physical structures and organization patterns of buildings, blocks, neighborhoods, villages, towns, cities, and regions" (p. 1).

The built environment within a community relies on each of the seven physical infrastructures and its resources and supporting systems in dependence for healthy and livable communities. The supporting systems consists of seven different variables essential to the survival and health of community; transportation, energy, water, natural environment, food production/agriculture, solid waste, and economic systems (Coyle, 2011).

Within built environments lie two fundamental types of communities; Conventional/High-Carbon (CHC) communities and Resilient/Low-Carbon (RLC) communities (Coyle, 2011). CHC communities, also known as conventional suburban development, results in separated use of zoning, including main lines of transportation structures and sprawl structures (Ulrich-Schad, 2018). According to Coyle (2011), RLC communities are "generally compact in form, compromised of pedestrian-scale blocks and streets, boasts a diversity of necessary and desirable functions" (p. 8). In lesser terms, RLC communities are less dependable upon automobile usage and generally have all daily necessities in one area.

Like most medium-sized to large cities, the built environment in Flint is considered a CHC community, as the city zoning is sprawled out into a mix of residential, commercial, and industrial areas that are primarily reachable with the use of automobiles (see Zoning Map 1.1). According to the Census Bureau (2016), 88.5% of Flints residents commuted from home to their workplace by car (including trucks & vans), 4.6% traveled by form of public transportation (busing system), while 2.8% traveled by foot (3.1% worked at home). The average amount of travel time from home to work for Flint residents resulted in nearly 24 minutes, while 82.6% worked in Flint city's boundaries and 17% worked outside of city boundaries (Census Bureau, 2016). Although it's currently the least of Flint's worries, high dependency upon automobiles are adding to the major air pollution problem worldwide that is destroying the earth's atmosphere and contributing to the global warming effect. Surprisingly, the air quality in Flint sits at a rating of 37, which is considered good (The World Air Quality Index project, 2018).



Map 1.2. Zoning Map, 2018
Source: City of Flint, 2016
(https://www.cityofflint.com/wp-content/uploads/Current-Zoning-Map-Updated-1-16-2018.pdf)

The racial make-up of the Flint community consists mostly of the Caucasian and African-American Ethnicities. According to U.S. Census (2016) the Caucasian race makes up 40.4% of the population, while the African-American race occupies 54.3% of the population (all other races are in the remaining 4% of the population).

The small city of Flint is a clear description of a very poor and low-class community. The economy in Flint severely struggles as 41.9% of community residents are living below poverty lines (US Census, 2016). The median household income is also very low, sitting at $25,650 per year, as there are only 11.2% of residents with a bachelor's degree or higher (US Census, 2016). The unemployment rate in Flint is also 4.1% (US Bureau of Labor Statistics, 2018). However, even though the unemployment rate isn't considered relatively high, manufacturing jobs such as GM and others continued to be replaced with an increased number of lower paying service jobs, ultimately decreasing money flow within the community and lowering the Flint economy.

In the documentary film 'Roger and Me' directed by Michael Moore (1989), he gives his audience a first glance of the effects of GM closing down all of its factories in Flint, leaving thousands of residents jobless. GM CEO Roger Smith closed the factories in downsizing efforts to save company expenses. Flint was the birthplace of the GM manufacturing plants which employed nearly all of Flints residents. The impact of its closing was substantial to the entire Flint community. The loss of these local manufacturing jobs, which was a cash cow that brought lots of money into Flint, left its entire community scarce. A vast majority of residents fled the community in hopes to find jobs elsewhere as the families who weren't financially able to leave ended up being evicted and homeless. Crime rates skyrocketed as Flint became a place where people had to fight to survive. Since a vast majority of its residents left, Flints local government tried to bring in several different types of businesses such as Amusement parks, luxury hotels, etc. to keep money flowing within the community. None of them succeeded and left the city with large amounts of debt.

Emergence of the Water Crisis

Management of a community's natural resources must be a number one priority in human and environmental health for the sustainability of any community. Coyle (2011) discusses, "there are many legal and regulatory challenges to providing sustainable communities, and there are multiple appropriate solutions" (p. 101). The City of Flint (2016) is dealing with the lack of regulations, corrupted community officials, and poor policy issues that has been ongoing for decades. More recently, the 'water crisis' event has surfaced in polluting the city's water systems and threatening the lives of all community residents.

In 2011, the state of Michigan took control of Flint's finances due to an audit estimated at a $25 million deficit (CNN Library, 2017). In years prior to 2014, Flint got its water from Lake Huron, but had to switch to the Flint River as a main water source in order to reduce the water fund shortfall (May of 2014). On December, 14, 2015, the City of Flint (2016) issued a 'State of Emergency' to all community residents in the Flint area. Immediately after the switch, Flint's residents experienced an intense amount of lead poisoning and legionnaires' disease in the water (service lines and household plumbing) due to leakage of lead from pipes running through Flint River (City of Flint, 2016). The toxic water system has been running throughout household and community pipelines causing illnesses, disabilities, and sometimes deaths in community residents.

Photograph 1.1 Flint, MI Lead Contaminated Water
Source: Zoom, 2016

Inspiration of the study

The motivation of this study is to identify why and how such events occurred in the Flint community to cause such an event as the water crisis, as well as solutions in fixing the problem. Could these events have been avoided and how? Yes, there are many perspectives and ideas on why and how the water crisis surfaced in the Flint community.

In general, American communities consists of built water systems that have been persistent in keeping American communities safe for years. These American water systems have been so successful in the past mainly because of the funding it received from local and federal governments in improving and advancing the nations water systems infrastructure with the best technology possible. In recent times, America has been facing the reality of underfunding in maintaining and improving water systems across America (Infrastructure Report Card, 2018). The result of underfunding brings problems with aging infrastructure that either doesn't function properly or is in desperate need of upgrades. In the case of the Flint community, there are many variables to why and how the water systems failed and poisoned the community.

Another motivation of this study is that the water crisis has been occurring in the community since 2014 and should be reaching the finishing stages of providing clean water for all of its residents. The city of Flint is doing its community residents a huge injustice as people still aren't able to receive drinkable water through household pipelines for themselves and family. Holding individuals accountable and identifying the causes of the problem by providing factual information, as well as finding solutions in solving these issues, will be beneficial in representation to the public and other communities to view. Showing the public that these same problems could have been avoided by having good preparation for better planning in protecting our communities from such tragedies are a must.

Broader Community Needs and Objectives

With all the national, state, and local help that Flint has been receiving due to the water crisis, the main goal of this project is for the community of Flint to be self-supportive and self-sufficient in providing clean drinkable water throughout community pipelines in Flint. Although achieving this goal won't fix all of Flints problems, it is an essential step in enabling the community to be able to provide sustainable livelihoods for all community residents. Replacing all corrupt officials on the state and local levels are also key objectives in getting the community towards a safe, healthy, and sustainable environment. Other objectives are for the community to be able to provide equal opportunities for all ethnicities and cultures.

Organization of this Community Analysis

This creative component has the following sections:

Section I. Introduction. This previous section explains the background, the inspiration and the goals and objectives of the study.

Section II. The Approach. This section provides the methods and strategies that will be applied in restoring the Flint community.

Section III. Literature Review. This section provides all of the practical and theoretical information that supports the project. The evaluation of the literature is broken down into three parts. The first part reviews the argument of environmental racism in the community as an intended act in the Flint community. Second part discusses the involvement with General Motors (GM) linking to the water crisis. Lastly, it discusses the responsibility and involvement on state and local city officials and their acts regarding the economic state and creation of the water crisis.

Section IV. Applying the Methodology. This section will provide examples on how the community development models and strategies will be applied the Flint community.

Section V. Conclusions and Recommendations. This final section of the project will discuss all community development implications on the knowledge gathered and gained from research in putting the project together. Will also include the challenges that were faced in putting the project together as well as suggestions in continuing to push the Flint community forward.

Section II: The Approach

Methodology

In studying a community, the task of gathering information can be accomplished in a variety of ways or methods. This section outlines the many different sources of gathering information while utilizing those sources to fit into the Community Capitals Framework (CCF) method created by Flora, Flora and Fey (2004) as well as Cooperrider and Srivastva (1987) Appreciative Inquiry (AI) approach that will be applied to the Flint community.

Applying these approaches to the Flint community is beneficial in several ways. The CCF and AI best fits the water crisis in Flint, because it focuses on optimistic thinking of improving each capital within the community. Thus far, the polluted water has had a very negative and slow start when making effective efforts in fixing the problem. Due to such a slow start, reports of community residents feel hopeless and that their state and local government are doing them an injustice by not having the ability to access clean faucet water since 2014. These approaches provide a structural step by step process in laying out a clear comprehensive plan keeping local community residents engaged as well as speeding up that process of recovery.

More than often communities work within their local environment when solving community issues. The CCF and AI approaches are used as tools when engaging the national and local public in seeking additional resources. In retrospect of the crisis and other problems within the Flint community, these approaches vitalize public engagement in collecting all resources outside and inside the community. That concept alone, stands out because the community of Flint needs all the national attention and help they can attain in fixing the water crisis and other issues such as extreme poverty. In gathering information for this community analysis, there will be a few research techniques and tools used in incorporating the CCF and AI approaches to Flint.

Research techniques

Research techniques that will be used in this study is secondary data analysis. This data analysis is based upon published research that has already been used effectively. Johnston (2014) discusses, in recent times technological advances have been created in which huge amounts of data has been collected, compiled, archived, etc., and is now more easily accessible for research. Utilizing credible websites, such as the U.S. Census Bureau will be a key factor in gathering numerical data, which will be a vital source of secondary data that will include housing, health, education and economic statistics information. Utilizing the City of Flint (2016) website for zoning maps, demographic maps, and local newspapers will also be necessary. Due to my current occupation of playing professional basketball out of the country I will unfortunately be unable to have face-to-face meetings with local organizations in the Flint community (as well as phone interviews).

The Community Capitals Framework benefits the Flint community in numerous ways. As a failing economy with a very poor quality of life, the CCF puts an emphasis on improving each and every contributing factor or capital within a community. As there are many different factors within a community, the improvement of one can cause a domino effect on increasing others.

Community Capitals Framework

CCF was first introduced by Cornelia and Jan Flora with Susan Fey (2004) and is one of the newer community development models that is becoming one of the main approaches in analyzing communities and community development. This structured planning approach has been used by popular groups such as the Great Plains IDEA Community Development, the North Central Regional Center for Rural Development, Non- Government Organizations (NGO's) and

many researchers across the globe. During the analysis of behaviors of entrepreneurial communities, Flora, Flora and Fey (2004) found that communities that had the most success in supporting economic development and healthy sustainable environments, focused on seven types of capital: 1) natural; 2) cultural; 3) human; 4) social; 5) political; 6) financial; and 7) built (Emery et. al, 2006). What is capital? Flora, Flora and Fey (2004) describe 'capital' as, "any type of resource capable of producing additional resources (page 165)... When those resources or assets are invested to create new resources, they become capital (page 9)."

Community Capitals focuses mainly on the 'assets' of a community instead of community needs and shortages. What is an asset? According to the Business Dictionary (2018), an asset is, "Something valuable that an entity owns, benefits from, or has use of, in generating income… An asset can be something physical, such as cash, machinery, inventory, land and building" (pg. 1). Assets can also be intangible. According to the Canadian Rural Partnership, "assets can also be intangible, like the work that volunteer groups do to beautify the main street or raise funds for the food bank" (pg. 1) An asset can also increase its value and become capital when it is invested. According to Emery et. al (2006), "A community rich with elders has assets in historical knowledge, a diverse population, and a base of information about the past and wisdom for the future. If a mentoring program is developed with the elders and youth, then the asset is invested, becoming capital (pg. 3)." These assets can be invested to produce more assets or diminish if unused. See Figure's 2.1, 2.2, and 2.3 for Asset Maps.

The following seven types of capital:

Natural capital can be looked upon as the worlds stocks of natural assets such as geology, water (rivers, lakes), air, soil, wildlife, forests, parks, weather, and things natural beauty. Flora & Gasteyer (2015) explains natural capital as the enhancer to other capitals. In contrast, other

capitals can worsen natural capital. All living things depend solely on natural capital for quality of life and sustainability. Consists of air quality, water quality, soil quality, biodiversity, natural resources, etc.

Cultural capital can be explained as the way people "know the world" and how to act within it (Emery et. al, 2006). This consists of heritage, values, traditions, multi-lingual population, ethnicities, ethnic festivals, and all the manners of who we feel comfortable around. Emery et. al (2006) explains, "Cultural capital influences what voices are heard and listened to; which voices have influence in what areas; and how creativity, innovation, and influence emerge and are nurtured (pg. 5)."

Human capital consists of the skills and abilities that people possess. Emery et. al (2006) explains, it is also, "the ability to access outside resources and bodies of knowledge in order to increase our understanding and to identify promising practices (education, skills, health, and youth) (pg. 5)." Emery et. al (2006) continues to explain, "Human capital also addresses leadership's ability to "lead across differences," to focus on assets, to be inclusive and participatory, and to be proactive in shaping the future of the community or group (pg. 5)." See Figure 2.1.

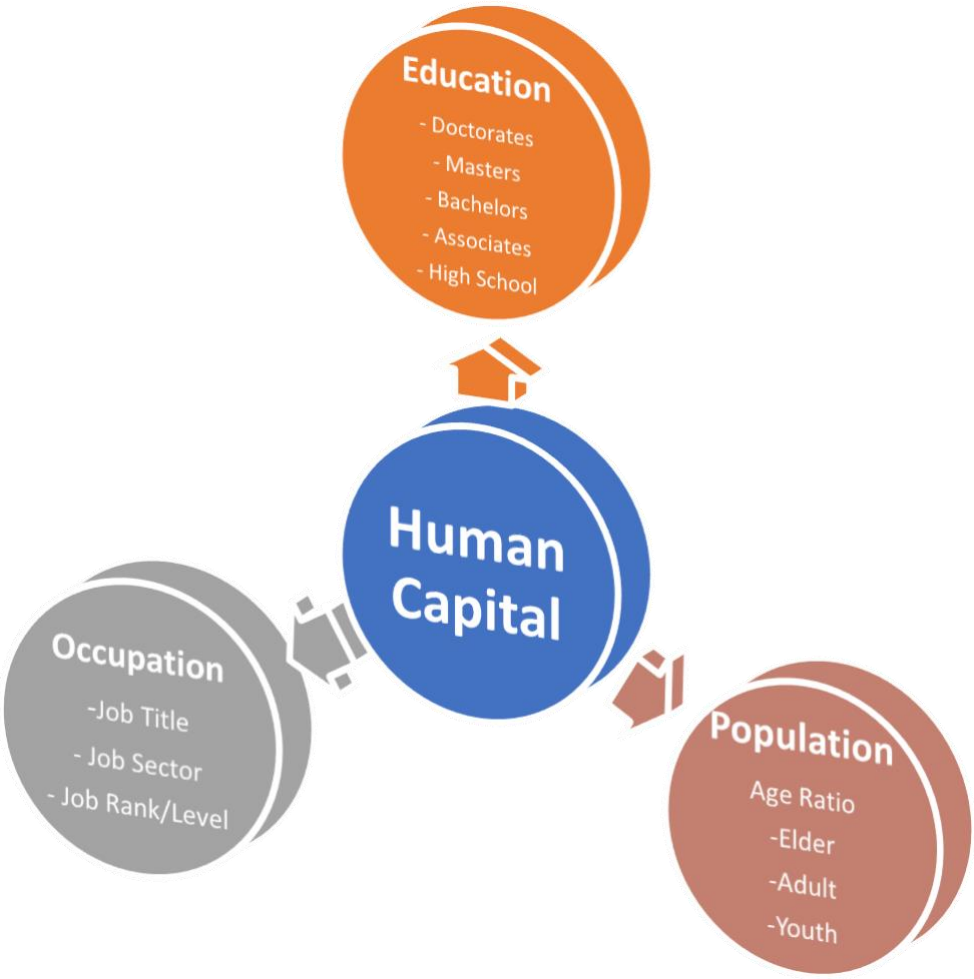


Figure 2.1 Human Capital Asset Map

Social capital can be seen as the 'social glue' or the connections among people and organizations that put things in motion. Social capital development comes in the form of bonding or bridging, and it also provides a source of personal identification for members of the community across race, gender, and other demographic boundaries (Clopton & Finch, 2011). Emery et. al (2006) explains bonding and bridging social capital as, "Bonding social capital refers to those close ties that build community cohesion…Bridging social capital involves weak ties that create and maintain bridges among organizations and communities (pg. 6)." See Figure 2.2.

Figure 2.2 Social Capital Asset Map

Political capital contains many distinctive levels of 'power' that defines the true embodiment of this particular capital. In the words of Flora, Flora & Gasteyer (2016), "political capital involves organization, connections, voice, and power as citizens turn shared norms and values into standards that are organized into rules, regulations, and resource distributions that are enforced" (p. 184). Within the political capital power, there is the ability to create a situation that others would be in dissatisfaction of or changing a situation to turn out for the desires of others. To better understand the fundamentals and structure of this capital power, there has to be an understanding of the stratification within a community, involving its leaders and power elects, organizational voice, and resident voice. Community stratification is very important for a

community developer to recognize, in the sense of knowing which direction to take in completing particular jobs.

Emery et. al (2006) describes financial capital as, "the financial resources available to invest in community capacity building, to underwrite businesses development, to support civic and social entrepreneurship, and to accumulate wealth for future community development (pg. 6)." Financial capital is also intertwined between two sub-categories: private and public capital. Flora, Flora & Gayester (2015) explain, private capital referring to the groups or individuals that invest in their resources to build their private capital, whereas public capital includes the resources invested by a company or city to build amenities, roads, parks, and schools. See Figure 2.3.

Figure 2.3 Financial Capital Asset Map

Lastly, Flora, Flora & Gayester (2016) discusses that built capital enables individuals and businesses to be more productive in communities. Even though built capital cannot guarantee economic health and well-being, built capital can be used in high-yielding ways that contributes to the quality of life in a community. Built capital can be explained as the infrastructure that supports the community, such as telecommunications, industrial parks, main streets, water and sewer systems, roads, schools, hospitals and other public and commercial buildings, police and fire-protection facilities, playgrounds & soccer fields, electrical & gas utility systems, airports & railroads, etc. (Mattos, 2015). Built capital can be seen as more of a focus of community development efforts or the supporting foundation that enables human activity, instead of a direct contribute to a community.

The community capitals approach enables us to use a more focused perspective of the numerous elements, resources, and interactions within a community and their influence to the entire performance of the community. After the community capitals are recognized, they then can be used as a tool for preparation for the future (Mattos, 2015). Mattos (2015) explains, "this way community resources can be evaluated and needs can be identified as well as partnerships created to develop lacking community capitals. In addition to identifying the capitals and the role each plays in community economic development separately, this approach also focuses on the interaction among these seven capitals and the subsequent impacts across them" (pg. 1). The anticipated results of investing in the seven forms of capital are to accomplish a vibrant local economy, social well-being, and a healthy environment as shown in Figure 2.4.

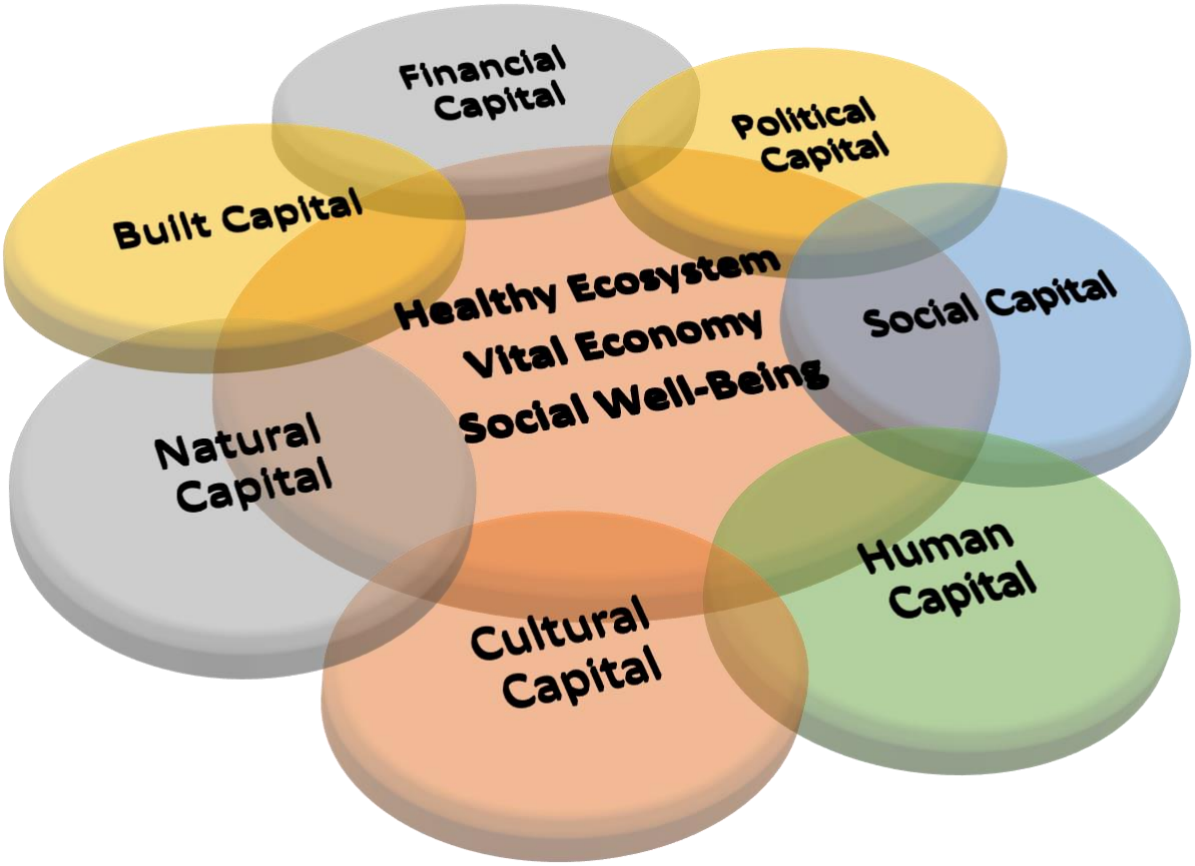


Figure 2.4 Community Capitals Framework

Appreciative Inquiry

In the literature of applying the community capitals to community development efforts, derives a few strategies that are associated with the Appreciative Inquiry. Emery et. al (2006) explains, "The focus on "appreciative" means that we think of the world as a glass that is half full as opposed to a glass that is half empty. Our appreciative eye focuses on the things that are working" (pg. 3). The lens on "inquiry" indicates the journey for knowledge and understanding. Emery et. al (2006) discusses, "We rely on the stories people tell about what is working in their lives and their communities and what they wish for the future as both the content and inspiration in our quest for new knowledge and positive social change" (pg. 3). AI enables positive thinking and explores for new ways of using the appreciative eye to see things for what they are and analyze what is working well and why. It opens doors for optimistic actions rather than being negative about the things that aren't present.

In general, the appreciative inquiry refers to a process of identifying the strengths and successes that already exist in the community. The traditional appreciative cycle usually consists of the 4Ds, which are the discovery phase, the dream phase, the design phase, and the deliver phase; some approaches uses six D's (Define, Discover, Dream, Design, Deliver, and Debrief). The discovery phase focuses on identifying accomplishments in the community and analyzing what factors contributed to the success. The dream phase requires residents to visualize how they could build on these successes to advance the quality of life in their community. The design stage includes people in emerging plans to achieve goals that were classified in the dream stage. The last stage of the appreciative cycle is deliver, which includes constant learning and modifying to carry out the goals. The cycles in the appreciative inquiry model are very specific and detailed oriented allowing anyone to follow them as seen in Figure 2.5.

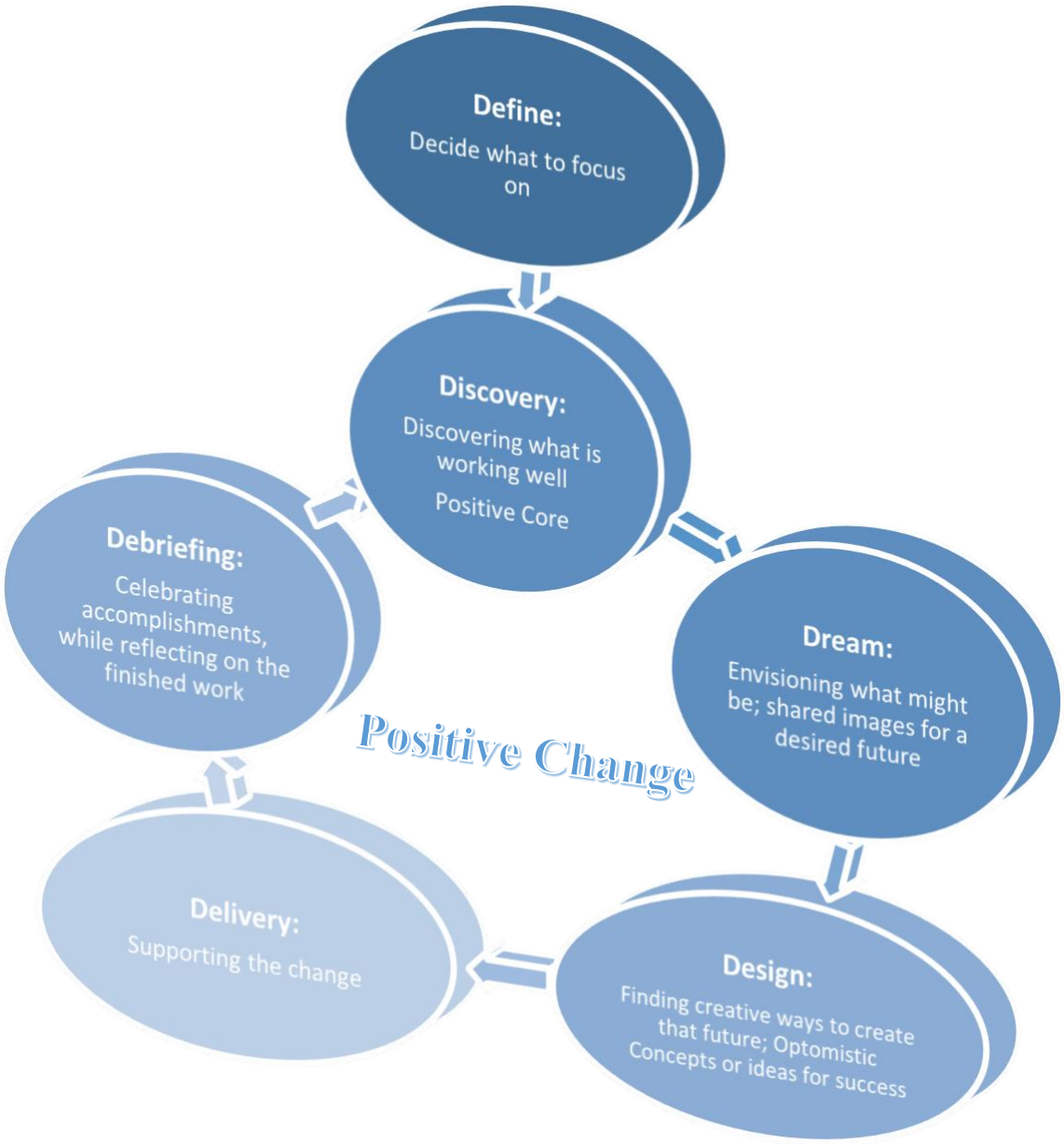


Figure 2.5 Appreciative Inquiry Process Cycle

Section III: Literature Review

Why did Flint officials fail to complete the water treatment processes that all American communities are required to use before distributing its water from the Flint River to community residents? For more conclusive reasoning, two additional questions may be useful. What current actions have national, state and local government officials made in Flint in finding the causes of the water crisis? What current actions have national, state and local governmental officials made in finding solutions to resolving the water crisis?

Each question holds value in how and why such events persisted in Flints water system and is called upon for answers for national, state, and local levels to have so such events will be accounted for and prevented in the future. Dealing with such an epidemic in the failure of a vital natural resource as water, is a major health risk on environmental and human life including billions of dollars in fixing. Finding the roots of the problem is beneficial in the assurance that such events are prevented to reoccur.

There are many theories and themes on why the water crisis is occurring in the Flint community. Three main reoccurring theories or themes that has been evident from existing research in the issue of why the water crisis occurred in the small city of Flint consists of: staged environmental racism, General Motors (GM) polluting Flint River with corroded vehicle parts, and poor policy planning and implementation by the state and local government officials. Although each of these three approaches relate to the topic in different ways, they also hold significant reasoning in why and how the Flint water crisis happened and ways it can be prevented in the future.

Environmental Racism

After looking into the socioeconomics and geography in the Flint community, many researchers believe that the state and local government officials caused the water poisoning as an act of environmental racism. Although there really isn't just one universal definition for environmental racism, there are various definitions that researchers and politicians agree upon. Past studies of environmental racism is targeted toward poor minority groups and/or low-income areas. Holifield (2013) explains, "in academic literature the terms usually refer to geographic associations between pollution or waste sites and low-income or minority communities'' (p. 78). The community of Flint is a clear description of a very poor low-income community. According to the US Census (2016), Flint has an overall population of 98, 918 people, while almost nearly half of those people (41.9%) live below poverty lines. The median household income is very low, sitting at $25,650 per year, as there are only 11.2% of residents with a bachelor's degree or higher (US Census, 2016). The unemployment rate in Flint is also staggering sitting at 23.7% (US Census, 2016).

Unlike most communities in poverty where the minorities are the poverty stricken victims, the majority of the Flint community are of the poverty stricken group. The minorities in Flint mainly consists of White or Caucasian race (40.4%), while the majority are of the Black or African-American race (54.3%) (US Census, 2016). A staggering 45.3% out of the African-American race in Flint live below poverty lines (See table 1.1.) (US Census, 2016). For this main reason, along with many others, many researchers think that African-Americans are the targeted group to be taken advantage of when determining environmental racism as well as racial capitalism.

Table 3.1 Income and Poverty in Flint, MI Compared to United States (2016)

	Flint	United States
Population Total (%)	98, 918 (53,757 (54.3%))**	318,558,162 (40,241,818 (12.6%))**
Median Household Income	$25,650	$55,322
Percent Below Poverty Lines	41.9% (45.3%)**	15.1% (22.3%)**
Unemployment Rate	4.1%* (30.3%)**	7.4% (13.3%)**

****Black or African-American race**

Source: U.S. Census Bureau (Factfinder), 2016
*U.S. Bureau of Labor Statistics, 2018

Pulido (2016) indicates, "The Flint case is especially interesting because the immediate source of the problem is not a reckless emitter or a polluter cutting costs – the typical drivers of environmental injustice'' (p. 1). The Flint community has been in a state of financial debt for years that the majority of the community race are easy targets of elimination. Pulido (2016) explains, "the people of Flint are so devalued that their lives are subordinated to the goals of municipal fiscal solvency. This constitutes racial capitalism because this devaluation is based on both their blackness and their surplus status, with the two being mutually constituted" (p. 1). Pulido (2016) continues to state, "Such treatment, including deliberate poisoning, is reserved for those who are not only racially devalued but considered incapable of contributing to accumulation" (p. 2).

Bullard (1993) indicates that people of color are the targeted groups to bear the nations pollution problems. Bullard brings forth the case of environmental racism in Warren County, North Carolina in 1982. He states, "The rural, poor, and mostly African-American county was selected for a PCB landfill not because it was environmentally sound choice, but because it seemed powerless to resists" (p. 3). In such a predominantly Black and poor community, Flint

was powerless in facing the actions of its local state government. Bullard (1993) continues to explain, "It is racial discrimination in the deliberate targeting of communities of color for toxic waste disposal and the siting of polluting industries… in the official sanctioning of the life-threatening presence of poisons and pollutants in communities of color" (p. 3). The signs and actions of environmental racism and racial capitalism is evident in the predominantly Black Flint community.

Another example of environmental racism are explained by Cole & Foster (2001) when determining toxic waste dumping sites. They present the very instances of studied patterns of environmental racism in cities across America. According to Cole & Foster (2001), they explain, "the Cerrell Report (1984 report done for the California Waste Management Board), suggested to companies and localities that were seeking to site garbage incinerators that the communities that would offer the least resistance to… such incinerators were rural communities, poor communities, communities whose residents had low educational levels, communities that were highly Catholic, communities with fewer than 25,000 residents, and communities whose residents were employed in resource extracted jobs like mining, timber, or agriculture" (p. 3).

Cole & Foster (2001) also explain how the California Chemical Waste Management company (the largest toxic waste dumping company in the U.S. and probably the world) targeted low-income minority communities. Cole & Foster (2001) state, "the U.S. Chem waste runs the largest toxic waste dump in the country (and, probably, the world) in Emelle, Alabama, which is the heart of Alabama's black belt, in a community that is about 95 percent African-American" (p. 4). Cole & Foster (2001) continues, "At the time, Chem Waste owned three other toxic waste incinerators: one on the south side of Chicago in a neighborhood that is 55 percent African-American and 24 percent Latino; one in Port Arthur, Texas, in a community that is about 80 percent Black and Latino; and one in Sauget, Illinois, which is surrounded by neighborhoods

that are 95 percent or more African American, including East St. Louis, an overwhelmingly African-American community that has been called "America's Soweto"" (p. 4). These very examples of waste companies being placed in targeted areas of high minority and low-income populations are the very illustrations of racial devaluation and environmental racism across American cities.

Corruption of General Motors

In the midst of the entire community of Flint, lies Flint's own automobile industry, General Motors (GM). Years prior leading up to the water crisis, was the financial crash of GM. Over more than 100 years, the small city of Flint started as the birthplace of General Motors automobile industry. The company was Flint and the city was built around it. The economy in Flint thrived off of GM's earliest years, prior to World War II where the foundation of the modern auto labor movement began, and for years was a place where people could make a good living (Felton, 2017). After many years of success, around the 1980's, GM soon experience slow profits, as the national market and government changed directions (CNN, 2017). In 2009, GM filed for bankruptcy (which put Flint in millions of dollars in debt) and left the economy in Flint scarce, as GM was the city's biggest top industry and main employer. After GM collapsed, the majority of GM's owners left the business to rot in Flint, leaving behind a huge mess of rusted auto parts (Felton, 2017).

There have been reports of GM dumping auto parts that consisted of large loads of lead into the Flint River; which poisoned the Flint River with extreme levels of lead. Craven & Tynes (2016) explains that GM dumped, "2.2 million gallons of waste per day into the Flint River. The

year before, the eight GM plants around Flint had dumped about 26.5 million gallons of industrial waste into the river each day" (p. 1). Flint River is located within the city of Flint, which is surrounded by the African-American race.

Even before switching the city's water from Lake Huron to Flint River, GM first tried the water at its engine plant. Felton (2017) explains, "…the water at its engine factory had become so problematic by October 2014 that it successfully persuaded officials to allow it to switch back to the previous source, the one provided by the city of Detroit (GM's assembly and stamping plants in town reportedly stayed on the Flint river, despite noticeable issues at the assembly plant)" (p. 1). Even after this event, state and local officials still decided to use Flint River as the main water source, knowing that it could present deathly impacts to community residents.

Photograph 3.1 General Motors Facility in Flint, MI
Source: Szymkowski, 2018

Poor Policy Planning and Actions

Local state and government officials are primary victims of the Flint water crisis. Such events building up to the water crisis can be viewed as poor policy planning and implementation and really governmental criminalization. Past and current policy planning and actions has tremendously affected the city's finances, natural resources, and health of community residents. Policy actions that were missed by city officials, were for the city to add orthophosphate in the Flint River to stabilize the community's drinking water and overall water quality (Torrice, 2016). By not carrying out this step, it has caused the city and its residents financial loss and illnesses & death.

Although the crisis was deemed as "missed" required steps and actions from local officials to carry out, there was a fallacy of hidden secrets. Wernick (2016) explains, "The drinking-water disaster in Flint, Michigan, occurred not just as a result of mistakes and bad decision-making — it was the result of lies, falsified science and a deliberate cover-up" (p.1). Wernick (2016) continues, "Even when local officials started detecting high lead levels in the water, rather than admit that they were breaking the law — which they and the EPA regional office knew as far back as April of 2015 — they didn't tell anyone" (p.1). Officials on the local and state level are corrupt in the Flint community. The challenge is, how does a government elected official weed out corrupted officials? What if Governmental power elects that hold the highest office positions and are in charge in keeping the community safe are the ones that are fraudulent at the highest degree? In Flints case, the evidence is persistent.

According to a case study conducted at Penn State University involving Flint water crisis, there is evidence that the local and state government was full aware of the lead poisoning and other diseases and bacteria that were found in the water, but said and did nothing until the event went public. Penn State (2017) explains that Governor Snyder's staff say they knew nothing

about lead poisoning and Legionnaires disease outbreaks from Flints water system until March 15, when there is a recorded email on October 14 speaking about such events. According to Penn State (2017) the email reads, "What she did share with me was interesting – that there have been numerous complaints about the Flint water, that the governor's office had been involved, and that any announcement by public health about the quality of the water would certainly inflame the situation" (p. 1). This email was sent from Susan Bohm, who is a disease specialist in the Michigan Department of Health and Human Services (MHHS) to her colleagues in her agency to record a conversation with Liane Shekter Smith, who is the state's top drinking water official, about concerns with the water quality in Flint (Penn State, 2017). After evidence of this email was found, Liane was fired (February 2016).

Holaly-Zembo (2013) explains that community officials and policy makers should identify and attempt to influence changes in public policies and organizational practices in obtaining health-supportive environments. According to Sterner (2003), he states, "The design and implementation of environmental and natural resource policies has been the focus of growing intensity throughout the world" (p. xiii). Although this statement can be deemed true, it starts with educating policymakers.

According to Holaly-Zembo (2013), it states, "Educating policy-makers - as well as citizens, professionals and advocates - about the need for local environments that support active living -- is an essential component of this strategy" (p. 3). Educating and selecting trustworthy and wholesome individuals that have policy-making expertise, is the next step in pushing the Flint community in the right direction. Providing quality policies and regulations, depends upon the human assets that community officials and policy makers acquire on such issues of human safety, economic security, and other sustainability community factors.

Photograph 3.2 Flint, MI City Hall (City of Flint)
Source: Carmody, 2017

Section IV: Applying a Community Development Method

In applying the CCF and AI methods into the Flint community, ideas and structuring format from Emery, Fey, and Flora (2006) were acquired. The structuring format uses CCF, AI, and some CBNRM methods that consists of seven strategy phases: 1) Building the Team; 2) Defining the Focus; 3) Discover; 4) Dream; 5) Designing the Future; 6) Delivery; and 7) Debrief. All of the information gathered in this section is provided from secondary data as well as documentary data from local organizations in Flint such as the City of Flint (2016) and other local government organizations.

Phase I: Building the Team

In initiating the planning process, there first must be a team put together to support the plan and to ensure the successfulness of the plan. The team should consists of individuals that holds value into making the plan work. Traditionally, planning teams usually consists of stakeholders or decision-makers that ultimately leaves out the voices that represent everyday life (Emery et. al, 2006). Emery et. al (2006) explains, "successful communities opt for a more inclusive model of leadership and community participation" (pg. 8). For this project, there will be a mix of individuals that represent everyday life in the community as well as some stakeholders within the community. Having both groups as the project leaders or planning committee adds diversity to the overall group.

Voices that represent everyday life will always be important, as these people bring full knowledge of the struggles and successes of the community, energy, perspective, and knowledge of asking important questions about responsibility and impact. The role of stakeholders also

holds a high level of importance when designing structured plans as this one. Each individual in the planning committee will an hold equal level of importance to the overall success of the project.

Linking with several stakeholders to build up 'community support' when addressing an issue is key. Dillon (2011) states, "the external consultant met with seventy-five hospitality and retail business owners/executives and economic development leaders in making his initial assessment and devising the rebranding plan" (pg. 6). Engaging with several stakeholders collectively gave more of a structured and thorough plan when assessing the issue from multiple credible perspectives. Coyle (2011) also explains, ""the public involvement process" describes the practice of engaging "stakeholders" – anyone who can influence, impact or be impacted by the plan, and general interested citizenry" (p. 38). Identifying the stakeholders are only part of the solution, the value of them comes from understanding their roles - formal and informal; and the best way to work with and influence them (Zucker, 2017). Zucker (2017) describes formal and informal roles as, "the formal role is often associated with their official standing in the organization. The informal role is based on their influence and power within the project" (p. 1). For example, a group topic specialist might not have a significant official 'tittle' but could be the only one in the group that understands the group process critical to the project.

After the planning committee is gathered, they will be in charge of organizing meetings and inviting individuals worldwide. Figure 4.1 is a sample map of the occupations and characteristics of skills a desired committee member might have, using the CCF format.

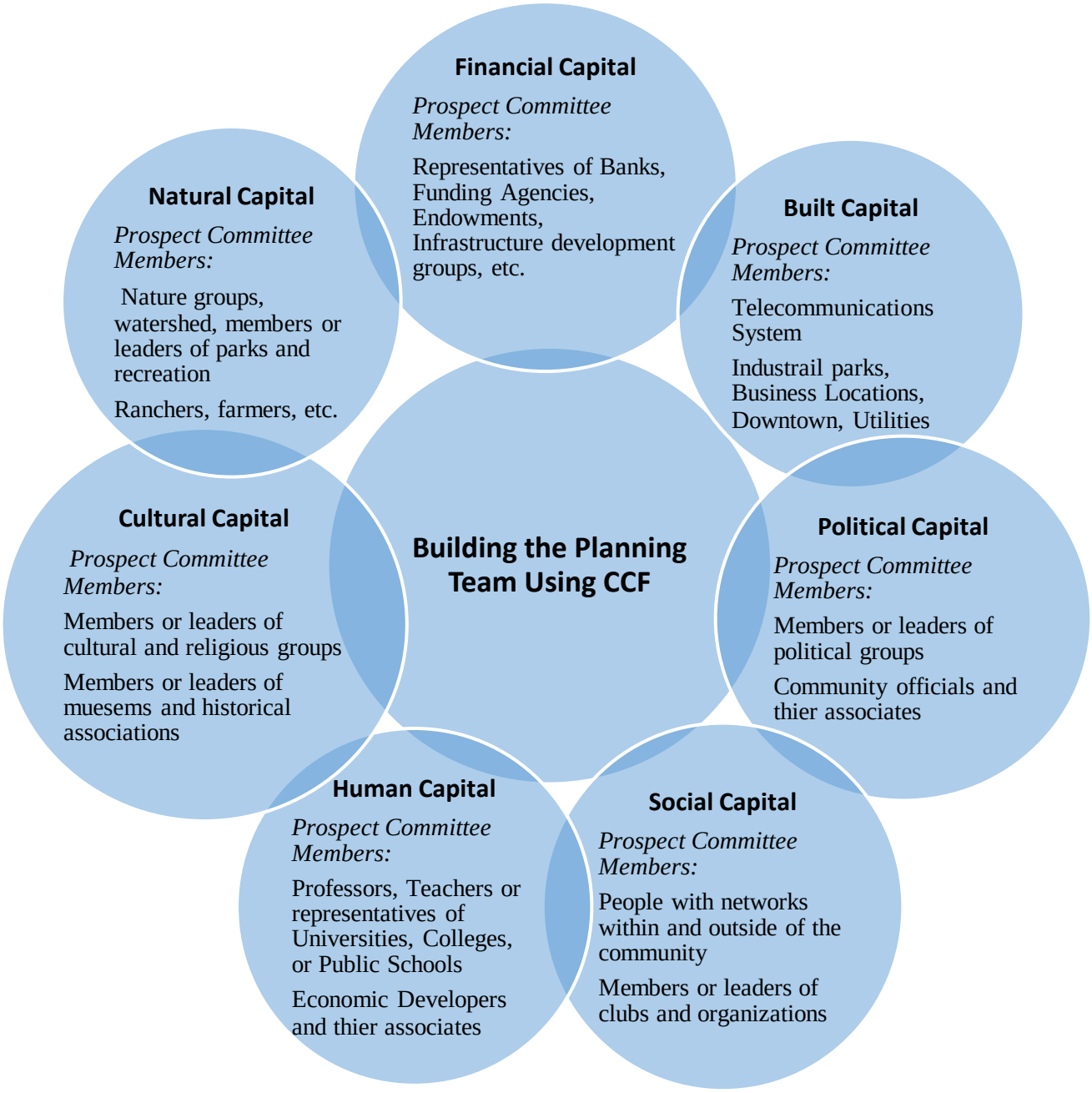


Figure 4.1 Sample Map of Planning Team Capitals
Source: Holden, 2018

In assembling the planning team for Flint, various types of active local organizations, stakeholders, and local government groups have been scouted. These organizations, stakeholders (including few individuals) and government groups will be invited to be a part of the planning team because of their active efforts as well as their financial and social influence they carry

within and outside of the community of Flint. Most of the listed names in Figure 4.2 has already greatly impacted the community of Flint (financially or by voice). Assembling a team out of the selected groups of the seven capital categories, would ultimately push the community further in improving the efforts of the community altogether. Figure 4.2 illustrates these desired members of the Flint planning team related to each capital that they contribute to.

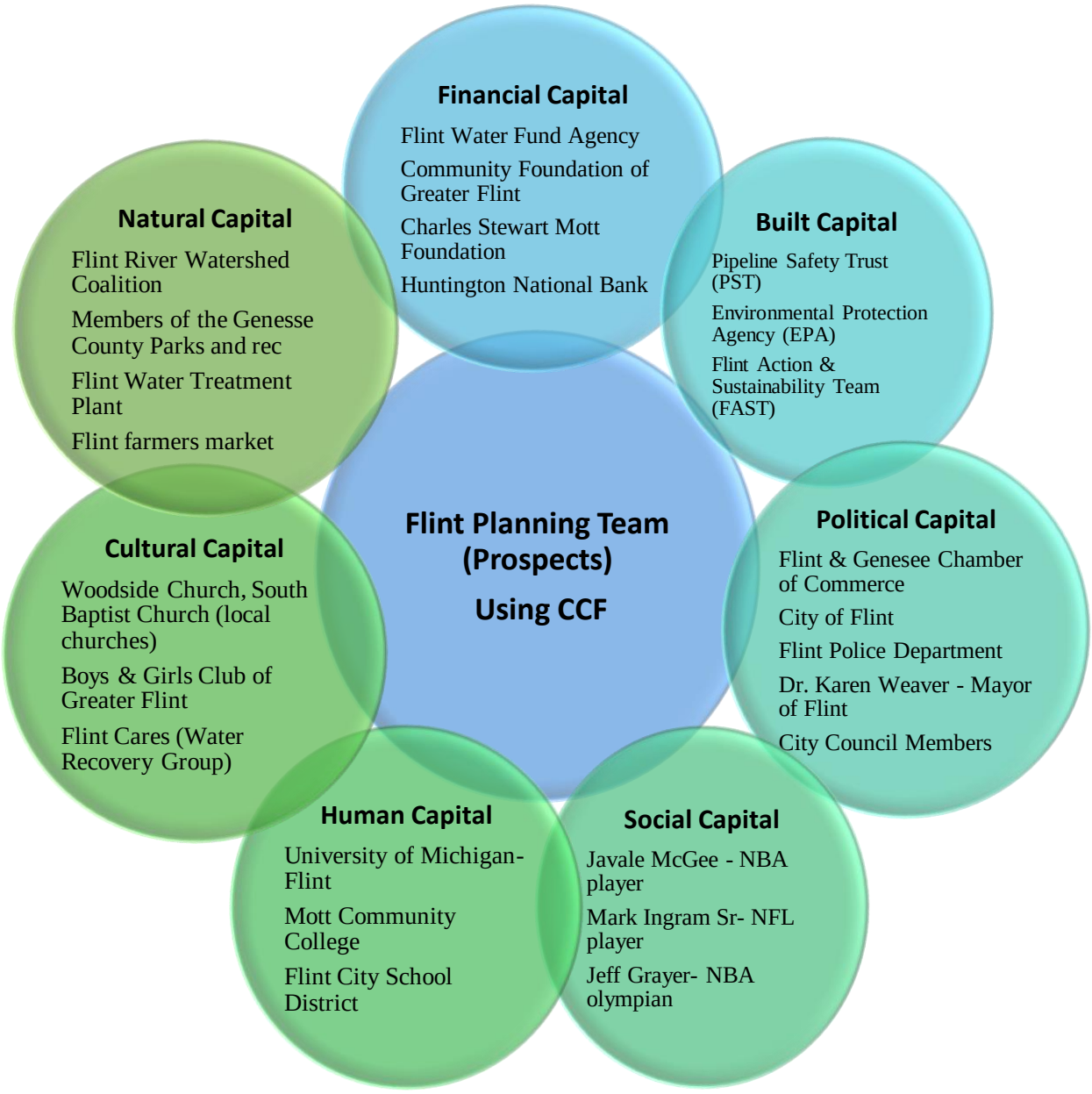


Figure 4.2 Prospects of the Flint Planning Team
Source: Holden, 2018

Once individuals are selected to be a part of the planning committee, a contact list will be constructed for each individual or group that is intended to be contacted, as well as a chosen contactor. Understanding that some of the prospective individuals and groups might not be available to participate, suggestions of others in that group may be asked to join.

As soon as the team is prepared, the next step consists of assembling the first meeting for the team. The first meeting will break down the entire project for everyone to agree upon and have a shared understanding, including which roles each individual will have. The meeting will also consist of the project plan being set on a table for everyone to see and provide feedback to. The significance of this meeting will enable the team to revise the project plan and provide the opportunity to present or discuss any unrealistic or incorrect information before presenting the action plan to the whole community.

Phase II: Defining the Focus

This phase of the process will incorporate the AI method, which will begin with identifying and defining the focus of the project. Since the AI method focuses on the positive outcomes that the community desires, the planning team will regroup for their second meeting to discuss, "what do we want and need to see more of in this community?" This segment will consists of the planning committee discussing each of their current and future perceptions of the community.

As the planning team discusses with each other, the group will determine what questions that should be asked to 'discover' the project focus. Examples of these discovery questions might

be, “Is there a moment in time that you felt good about being part of this community?” Follow up questions might be, “What made you feel so good about that moment?” Another follow up question that may be necessary would be, “What do you cherish most about this community?” Then using a Dream stage question, “What do you think this community would look like if it was considered the best community to live in?” After developing the discovery questions to define the focus, the planning team will first answer these questions amongst each other before taking these questions to engage the rest of the community.

Engaging the Community

In engaging the local community, there must first be a targeted group of individuals. In the case of Flint, all age groups will be targeted to be involved. All age groups will be engaged simply because the water crisis and poor economy has affected everyone in the community. Having all community voices participate in the project is essential when creating an action plan that will affect the entire community.

The next appropriate step is for the committee to construct an event that will bring the entire community together in one setting to hand out the developed questions. The committee will be in charge of getting the invitations out to the public community. Invitations will be sent out through various platforms such as social media, newspapers, local YouTube advertisement videos, local radio, local television, and Flyers handed out through local public schools and universities. This event will be open to all community audiences, involving seniors, adults, youth, and children. The event will consists of food, music, drinks, and fun activities relating to the project. This event will also most likely be locally televised.

Community participants will be introduced to the project plan at event setting. The planning committee will have tables stationed around the event that will have surveys or questionnaire pamphlets consisting of the developed questions by the planning committee. This part of the action plan is key because it gives community participants the opportunity to be creative and voice their opinion about the discovery questions and future dreams of the community. Not every idea will be used immediately, but will get people to think critically and provide their input. Community participants will also be advised that the project is open to other recommendations and ideas.

Having local friendly trusted faces as members of the planning team at the event is beneficial as it provides a comfortable feel for community participants. Since everyone in the community won't be able to attend the event there will also be online surveys going around the community. These surveys will be sent out to Flint City School District, University of Michigan-Flint, Mott Community College, and other local businesses in the community for community residents to voice their opinion. The overall mission of this event is for planning committee to include all people within the community to participate and share their thoughts and perspectives of the community, since the most important voices come from within the community.

After hours of questioning and working with the whole community, the planning committee regroups for their third meeting (excluding the event) and discuss the findings of the group and community participants altogether. At this point there is more than enough information acquired about what the community of Flint wants. Findings of the information acquired shows that the community wants clean drinkable water, a local government they can trust, a community they can feel safe living in, and have a prosperous living as in means of income. After further review, the committee concludes that the extreme poverty levels in the Flint needs to be eliminated as a first priority. Why? According to Yax (2011), extreme poverty

area's include area's that are "40 percent or more poor" (pg. 1 – More information). The community of Flint has 41.9 percent of residents living below poverty levels, in which 45.3 percent are of the Black or African American ethnicity (US Census, 2016).

The AI approach then incorporates these ideas to focus on what the community wants more of, instead of solely focusing on eliminating poverty. This then results on the community wanting and needing more of 'sustainable livelihoods'. What is a sustainable livelihood considered? According to the English Oxford Dictionary (2018), the term 'livelihood' is explained as, "a means of securing the necessities of life" (pg. 1). Which means having the means or capabilities of accessing daily needs such as water, food, clothing, shelter, income, and assets. In defining what a sustainable livelihood is, Chamber and Conway (1992) explains that, "a livelihood is environmentally sustainable when it maintains or enhances the local and global assets on which livelihoods depend, and has net beneficial effects on other livelihoods" (pg. 1). The community of Flint needs more of sustainable livelihoods, solely on the fact that nearly half of the Flint population is currently living below poverty levels and are not able to access clean drinkable water throughout their household water lines. The focus of the project is now identified and defined, the next step is to enter the Discover phase.

Phase III: Discover

After the event is complete (including online surveys), the planning committee will then collect all information to be analyzed amongst the group. The next phase is to perform a mapping approach integrating CCF and AI, which is a beneficial way in helping participants create the most inclusive lists of assets possible. This stage in AI focuses on helping groups and

individuals “discover the assets”. Members of the committee will then discuss amongst the group, “What assets do we already acquire under each form of capital?”

The fourth meeting of the planning committee will start with a planning session by asking individuals in the committee to interview someone in the group that they don’t know using the Discovery and Dream questions established in the Define stage. The meeting might start off slow this way but will build up after people engage and discuss their hopes and beliefs. The committee will then gather into small groups (depending on the committee size) and begin asking people to share their insights from listening to the discovery stories of others and to also breakdown segments that made those success story achievable. The next discussion will then take part in the committee identifying the community assets illustrated in the stories under each of the capitals, as seen in Figure 4.3. Small groups can then share their created maps to create a complete map of community capital assets acquired in the Flint community. Once this activity is complete the committee will then begin transitioning to the Dream stage.

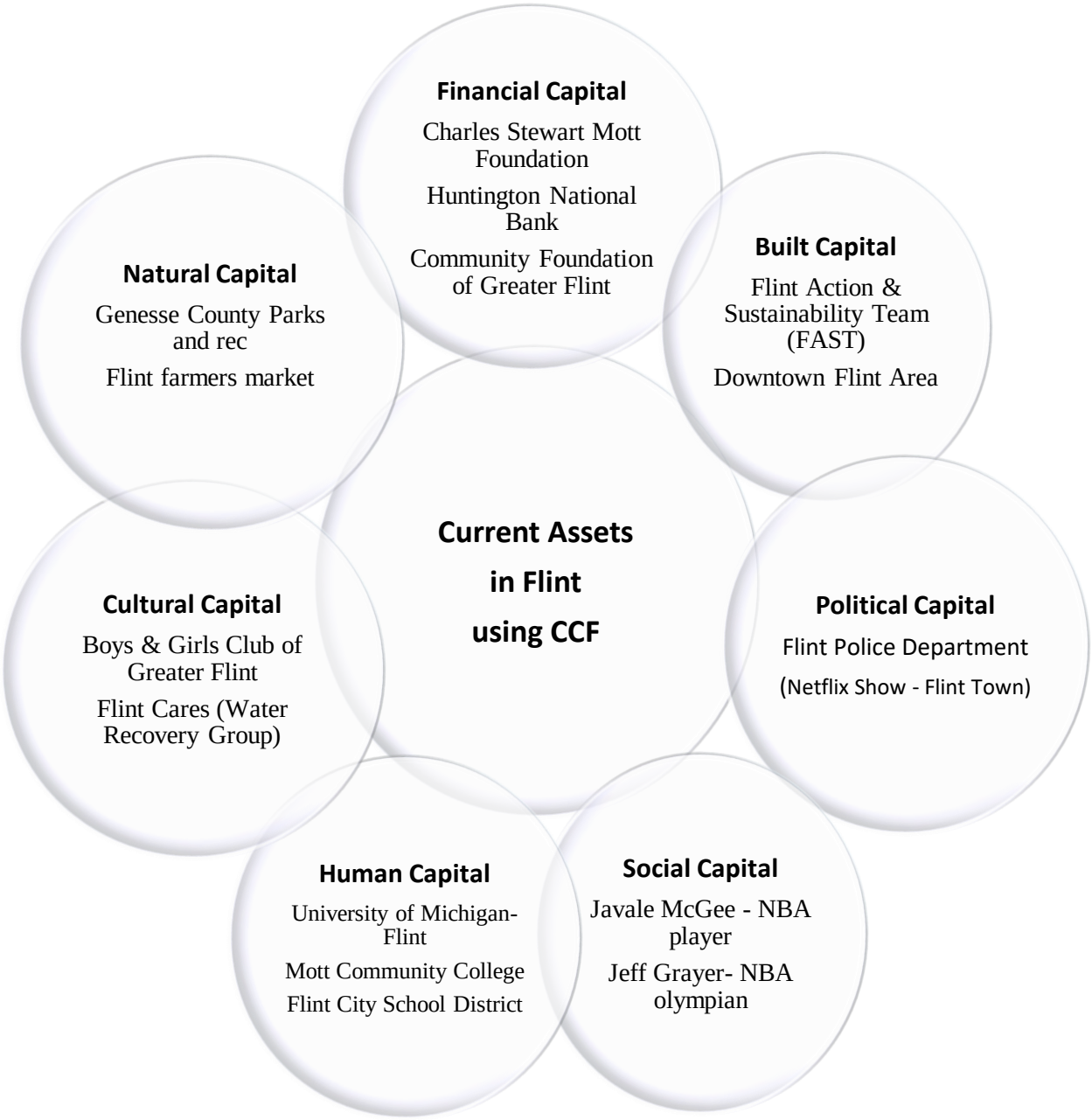


Figure 4.3 Asset Mapping in Flint using CCF

Phase IV: Dream

After assessing all of the community assets, the committee will then begin to process the stories that they dream the future to look like. The discussion of mapping assets is now directed towards a Visioning or Dream focus. Individually, the committee will start to write down a very detailed Dream story of how things can be "even better" within the Flint community. Emery et. al (2006) explains, "These processes work best when they are grounded in the reality of the current circumstances" (pg. 12). Next the committee will break into small groups and incorporate each other's ideas on a flip chart. Once this step is complete, the committee will then regroup to create a general Dream using a flip chart incorporating the CCF principles. This will be the most beneficial and easiest way for the entire group to express their ideas and insights as one overall draft. This part of the Dream phase is key, as it gives the committee the opportunity to be creative and express their own ideas. Information from the first community event and online surveys will also be incorporated into the overall dreaming process, as it includes all community voices instead of just the committee's. Once the committee illustrates all of the combined dreams into one, the next step is to organize the story elements by using the CCF principles, as seen in Table 4.1. Once the story elements are organized using the CCF, the committee can then transition to the design phase.

Table 4.1 Dream Elements by Community Capital

Natural Capital	Cultural Capital	Human Capital	Social Capital	Political Capital	Built Capital	Financial Capital
The Flint Water Treatment Plant is upgraded with the most modern technological advances.	All people of color within the Flint community have the same opportunities to those not of color.	Flint public/private schools, colleges, and universities are strengthened	More social clubs are formed	All untrustworthy officials are replaced throughout the entire community	All pipelines in Flint are newly replaced with the most modern advances possible	Multi-dimensional industries and businesses are brought into the community
The Flint River is treated and cleaned	All cultural businesses are welcomed to push the Flint economy forward	Flint high school graduation rate improved by 10% (83.2% according to US Census, 2016)	More celebrity public figures are welcomed into the city	Flint Police System is strengthened (as seen in the Netflix Show "Flint Town")	Modern homes are built throughout the entire community	Diversified companies are established in the community
	More festivals and community-wide events welcoming all cultures are held	More Grants are developed for poor residents to attend college on full scholarship	More community groups are formed	Individuals and members of the City Hall and Chamber of Commerce pass a "trustworthy conduct" exam and go through periodic checks	More roads built and upgraded throughout Flint. Downtown area is modernly developed	A professional sports team is brought into the community.
					New clubs and lounges are developed into the downtown area.	A Large Capacity Arena (20,000 seats) is built.

Phase V: Designing the Future

Once all dreams are formed and organized, the next phase is for the committee to transition these ideas into detailed strategies. The fifth meeting will consists of the committee using the previously created asset map and dream elements to create a strategy map. For this activity, committee members will focus on identifying a strategy that will move the community from where it is now to the future community members want to create. This activity will encourage the committee to think about the numerous influences of a single strategy. In the case of high poverty levels in Flint, the committee will develop strategies to design a future community that has sustainable livelihoods (using a flip chart). In doing so, the committee will then focus on developing scholarships for youth (as only 11.2 percent of the total population in Flint has obtained a bachelors, (US Census, 2016)). This single strategy of developing scholarships will connect with other forms of capital. For example, Emery et. al (2006) explains connections are made to "human capital as kids attain more education, social capital as people work together to develop the scholarships, financial capital as money is invested in education, and cultural capital as the importance of education is reinforced within the community" (pg. 13). Once the strategy focus is set, the committee will then illustrate this strategy under the each fitting capital as well as the potential impacts each one has, as seen in Table 4.2.

Table 4.2 Strategy Planning for the Future

Capital:	Natural Capital	Cultural Capital	Human Capital	Social Capital	Political Capital	Financial/Built Capital
Strategy:	Flint Water Treatment Plant receives the best modern advances	Significance of education is reinforced within the community	Community residents are more educated and has a new outlook based upon developed skills	Community leaders and committees work together to develop a scholarship	Grants and Scholarships are passed	Money is invested in education Downtown Flint is modernized All city pipelines are replaced with best modern infrastructure
Potential Impacts:	Clean water is now provided to all residents (Natural). More people move into the community (financial).	More kids go to college to pursue bachelors (human).	Income earnings increase (financial). More people Have community servicing occupations (political).	Community members are interacting w/ each other more (social). Community is encouraged to get the task done (cultural). They pursue the funding resources (financial).	Scholarships and Grants are passed and more residents become engaged with community issues (political). They attain the funding resources (financial). Community members work together to change the culture (social & cultural capital).	Residents bring in more money to the community from occupational earnings (financial). School systems provide the best resources in providing knowledge to students (human and cultural capital). Residents are appreciating their local environment (built/natural/cultural). New clubs and lounges are developed into the downtown area (built/financial)

Phase VI: Delivery

Once the designing phase is complete, the committee will regather for their sixth meeting. This stage of the process consists of the committee working on an action plan to implement the determined strategies. The implementation process includes measurements or indicators. Emery et. al (2006) explains indicators as, "something we can measure to determine change. Indicators may be broad brush statistics like average household income or per-capita income" (pg. 16). Having an indicator in the process is crucial because it provides the linkages from the outcomes of an action. For example, say an area has a high number of high school dropouts that is reported in an annual data base. If our program helps more students stay in school and graduate, we would expect to see that change in the yearly data reports. Identifying indicators are important when measuring progress for each strategy, objective, or goal in plan.

Once the committee has identified the key indicators, subjects that require the least work will be selected; important information on the impact of the strategy will be provided as well. Emery et. al (2006) describes an impact as, "In evaluation, impact sometimes refers specifically to how systems or institutions change in response to implementing a particular strategy. Here, we use it broadly to list the outputs (actions, events, programs, etc.), the outcomes (how people benefit from those actions, events, programs, etc.), and impacts (how systems change as a result of the action, events, programs, etc.)" (pg. 16). Once all steps of action plan process is complete, the committee will create a monitoring sheet that provides a tool for setting up the monitoring system using the CCF, as shown in Table 4.3. The committee will also select a few individuals from the group to collect the data for measurement.

Table 4.3 Monitoring Progress

Capital:	Natural Capital	Cultural Capital	Human Capital	Social Capital	Political Capital	Financial/ Built Capital
Strategy:	Flint Water Treatment Plant receives the best modern advances	Significance of education is reinforced throughout the community	Community residents are more educated and has a outlook based upon developed skills	Community leaders and committees work together to develop a scholarship	Grants and Scholarships are passed	Money is invested in education Downtown Flint receives modernized development All city pipelines are replaced with best modern infrastructure
Potential Impacts:	Clean water is now provided to all residents (Natural). More people move into the community (financial).	More kids go to college to pursue bachelor's degree (human). Residents are enjoying the culture (cultural).	Residents' Communication skills are enhanced and are more able to explain their ideas and make them happen (human & social capital).	Community members are interacting w/ each other more (social). Community is encouraged to get the task done (cultural). They pursue the funding resources (financial).	Scholarships and Grants are passed and more residents become engaged with community issues (political). They attain the funding resources (financial). Community members work together to change the culture (social & cultural capital).	Residents bring in more money to the community from occupational earnings (financial). School systems provide the best resources in providing knowledge to students (human and cultural capital). Renovated businesses are booming in downtown Flint. (Built & Financial)
Indicators:	Residents spend more time boating/fishing on the weekends. Population in Flint increases	More grants /scholarships are accepted from residents in poverty areas. In state college attendance increases..	A new idea is created from the community and put into action each year.	More social groups are formed.	Youth of 18 yrs. old are in the voting records.	City revenue is increased by bringing in tourists and outside visitors.

Table 4.3 Monitoring Progress (Cont'd)

Collection Process: **Who collects the data? How?**	**Who?** Flint River Watershed Coalition Members of the Genesse County Parks and rec **How?** Direct Observation	**Who?** Boys & Girls Club of Greater Flint **How?** Secondary data through In-state colleges/ university websites	**Who?** University of Michigan-Flint Mott Community College Flint City School District **How?** Data through online community websites	**Who?** Flint Cares (Water Recovery Group) **How?** Data through online community websites	**Who?** City of Flint Flint & Genesee Chamber of Commerce **How?** City hall online database	**Who?** Flint Action & Sustainability Team (FAST) **How?** Data through annual Fiscal report

The next step is for the committee to create a website database to store all information and ideas on. This will be beneficial for all community members, and even non-community members to have the opportunity to access the information whenever they want and for taking ideas for their own personal uses. The website information will contain all information that was used in conducting the project, including all individuals involved. The website will also include a comment section where everyone can express their thoughts and give and receive feedback. A structured timeline implementation sheet (see Table 4.4) will also be on the website to keep everyone informed of when events and actions are going to happen. The website will be very convenient for everyone (especially those who cannot make it to the meetings), as it will be easily accessible at any time of the day.

Table 4.4 Timeline Implementation

Actions	**Time**
Assessing Action Plan & Research	3-6 months before starting process
Building the team (Planning Committee)	Week 1 to week 8
Meet with local organizations leaders, schools, colleges, etc.	
First team meeting (Project Planning)	Week 9
Second Team meeting (Identifying the Focus)	Week 11
First community event	Week 14
Third team meeting (Defining the Focus)	Week 15
Fourth team meeting (Discover)	Week 16
Fifth team meeting (Designing the Future)	Week 18
Sixth team meeting (Deliver) (Creating the Website)	Week 19 to week 24
Delivering plan to Local Schools & Colleges	Week 25
Visiting Local Businesses, Churches, and other NGO's	Week 29 to week 35
Second community event	Week 36
Data Collection	Week 37
Seventh Meeting (Debrief)(Project implementation)	Week 38
Follow-up interviews & surveys	After 3 Months

Phase VII: Debrief

After all phases and events are complete, the last phase is for the committee to regroup one last time to debrief the entire project. This will consist of the committee using the AI approach in formative evaluation, reanalyzing all of the phases in order from the Define to the Delivery phase. The committee will go from the first to last phase in re-approaching the phase questions amongst the entire group. Figure 4.4 illustrates these debriefing steps in the project.

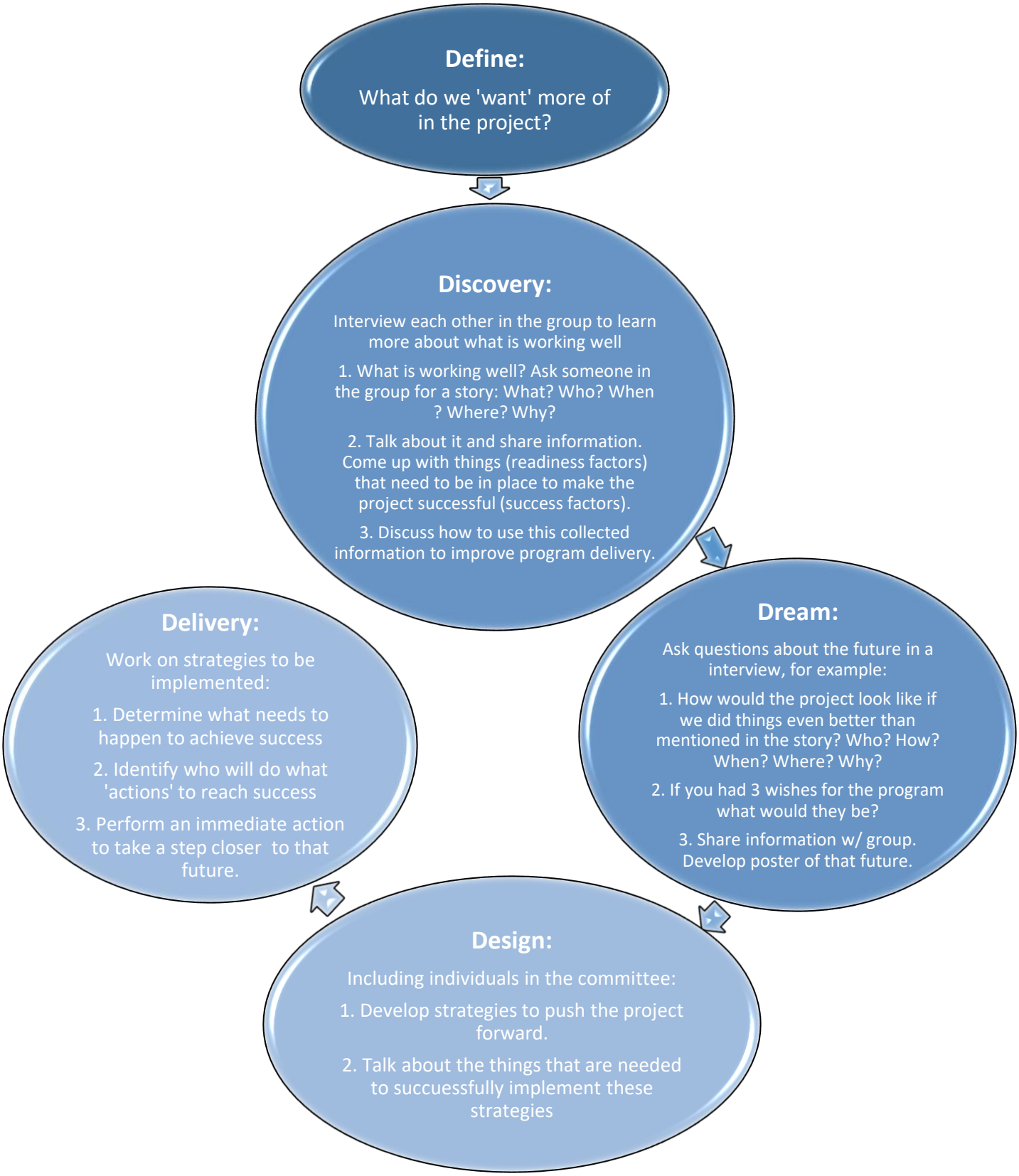


Figure 4.4 Debriefing Using AI

The purpose of this debriefing phase is to find out ways on making the entirety of the project even more better and more effective once the primary groundwork is laid. This phase gives the committee members assurance that their work will be successful as possible. Once all stages are re-analyzed within the group, the committee can then celebrate the success of the project.

The next question may arise to some: Why would a community development process in addressing Flint's water problem and economy in general be appropriate? According to Robinson Jr. et al. (2011) they explain, "development of all types requires reconsideration and transformation in the light of the sustainability imperative. Community development is no exception, new approaches and models are emerging around the world. Evidence indicates that this is less a movement than a scientific revolution and, as such, represents a paradigm shift (Edwards, 2005)" (pg. 262). The benefits of applying such a process to the Flint community are numerous. The entire economy of Flint lacks the ability to provide sustainable and healthy livelihoods. Not only will these processes fix the water problems in Flint, it will also build up other capitals within the community and provide a better economy with more sustainable livelihoods for community residents. These approaches also provides a structural step by step process in laying out a clear comprehensive plan keeping local community residents engaged as well as speeding up that process of recovery.

Lastly, the application of Ripple Effect Mapping (REM) can take place. Chazdon et al. (2017) explains REM as a method of "using core elements to engage program participants and other community stakeholders to reflect upon and visually map intended and unintended changes" (p.1). This process is also known for its cost-effectiveness and precision in meeting its community or organizational goals. Incorporating REM into the debriefing process will be

highly effective as it will visually layout the intended and unintended changes of the project and whether if an asset was impacted by another.

Where would one start in applying these approaches to the community of Flint? Starting with the emergency problem of increasing pipeline replacement speed would be the first focus. Other immediate solutions would be building community organizations to address future issues such as community pollution on every aspect (local officials, lack of sector diversity) that can help the community build towards a sustainable environment that supports an healthy local economy.

Section V: Conclusions and Recommendations

The local government of Flint, Michigan and the State of Michigan has dramatically failed its community residents with the absence of providing a safe and livable environment for all of its community residents, especially those of the African-American ethnicity. The findings of the community proves that the Flint community is an extreme poverty and low-educated community that lacks the existence of healthy policies and environmental and human protection. Historically, the Flint community are proven to allow corruption and poor business related spending choices to be persistent within its local government. Findings of this study also revealed the poor business diversity that lies within the community. The current water crisis was also established as a government action against low-income areas in the community, resulting in publicized environmental racism. Some city officials in charge of this incident has already been arrested for this type of behavior as the process to finding more are still underway.

In order for the community of Flint to move forward in having healthy and sustainable livelihoods, the community must find ways in increasing the strength of its community capitals. This project provides examples of the community capitals framework and appreciative inquiry being applied to the Flint community in efforts of achieving sustainable livelihoods. According to Mattos (2015) she explains, "CCF has proved itself very useful to help community developers and funders better understand the strategic nature of the funded program and the impact on rural communities" (pg. 1). The only dim spot of the CCF is that it is a newer community development model that hasn't yet received published work of it being effective in communities. Pigg et al. (2013) states, "although Community Capitals framework is increasingly used by a number of community researchers and practitioners in their work, there is little empirical work published that details the interaction of the capitals as they may be utilized by community residents" (pg. 492). Although more investigation needs to be done with CCF, I believe the investment in one capital will impact other capitals in the Flint community.

Improvements that are currently being made in the Flint community today is that the city has been replacing the lead contaminated pipelines throughout the community (more than 6,200 pipelines have been replaced so far, with a goal of 18,000 by Jan. 1, 2020 (Ortiz, 2018)), the Flint

police department has strengthened its department by replacing officials and performing stricter behaviors within the community (as seen in the documentary on Netflix called “Flint Town”), state and local officials are being charged and arrested for the cause Water Crisis event (a current total of 9 state and local officials have been arrested and charged so far (twelve felonies and six misdemeanors) (Michigan Gov, 2018)) while more are under review, and adding five new members to the city council (ABC12, 2017). In order for Flint to reach a sustainable and healthy environment, Flint must continue to make strides of improving its capitals and assets in all aspects within its community.

Looking at the overall picture in Flint; this community has been suffering since GM closed its factories within the city and left thousands of residents jobless. Since then, its local economy and government has been on an uphill climb. Before the occurrence of the water crisis, Flint was hurting from past situations and was simply not prepared for anymore tragical events. This proposal was created to not only help fix the water crisis in Flint but to apply the previous community development processes within the community to not only address immediate community capitals in need but build local community organizations that will enable its community to be prepared and able to address future community issues such as ones in the past.

Challenges that were faced in putting this study together were that no interviews from local organizations and businesses in the Flint community were conducted. My occupation and schedule of being a full-time overseas basketball player was challenging as I faced many internet difficulties. I think having a more inside look within the community, could have possibly gave me more information that’s not published on the internet. Although these limitations occurred, I was still able to access a large variety of information regarding the Flint community.

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